

CTLSH1-40M563**SURFACE MOUNT
HIGH CURRENT, LOW V_F
SILICON SCHOTTKY RECTIFIER**

• Device is **Halogen Free** by design

APPLICATIONS:

- DC/DC Converters
- Reverse Battery Protection
- Battery powered devices including Cell Phones, PDAs, Digital Cameras, MP3 Players, etc.

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Peak Repetitive Reverse Voltage	
Continuous Forward Current	
Peak Repetitive Forward Current, $t_p \leq 1.0\text{ms}$	
Peak Forward Surge Current, $t_p = 8.3\text{ms}$	
Power Dissipation (Note 1)	
Operating and Storage Junction Temperature	
Thermal Resistance (Note 1)	



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLSH1-40M563 is a high quality, low V_F Schottky Rectifier packaged in a space saving 1.6 x 1.6mm TLM™ surface mount package. This device is a TLM™ equivalent of the popular CMLSH1-40, SOT-563 device, featuring enhanced thermal characteristics, a package footprint compatible with standard SOT-563 mounting pad geometries, and a height profile of only 0.4mm.

MARKING CODE: CJB**FEATURES:**

- High Current ($I_F=1.0\text{A}$)
- Low Forward Voltage Drop ($V_F=0.55\text{V MAX @ } 1.0\text{A}$)
- High Thermal Efficiency
- TLM563 with a package profile of 0.4mm, compatible with SOT-563 mounting geometries

SYMBOL		UNITS
V_{RRM}	40	V
I_F	1.0	A
I_{FRM}	3.5	A
I_{FSM}	10	A
P_D	500	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Θ_{JA}	250	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	$V_R=5.0\text{V}$			10	μA
I_R	$V_R=8.0\text{V}$			20	μA
I_R	$V_R=15\text{V}$			50	μA
I_R	$V_R=40\text{V}$			200	μA
I_R	$V_R=40\text{V}, T_A=100^\circ\text{C}$			20	mA
BV_R	$I_R=100\mu\text{A}$	40			V
V_F	$I_F=10\text{mA}$			0.29	V
V_F	$I_F=100\text{mA}$			0.36	V
V_F	$I_F=500\text{mA}$			0.45	V
V_F	$I_F=1.0\text{A}$			0.55	V
C_J	$V_R=4.0\text{V}, f=1.0\text{MHz}$		50		pF
t_{rr}	$I_F=I_R=500\text{mA}, I_{rr}=50\text{mA}, R_L=50\Omega$		15		ns

Notes: (1) Mounted on 2 inch square FR4 PCB with copper mounting pad area of 2.4mm².

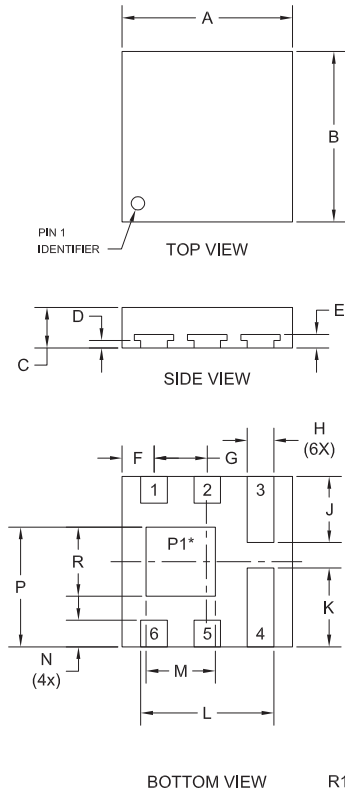
R1 (19-February 2010)

CTLSH1-40M563

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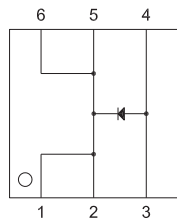


TLM563 CASE - MECHANICAL OUTLINE



* Exposed pad P1 common to pins 1, 2, 5, and 6.

PIN CONFIGURATION

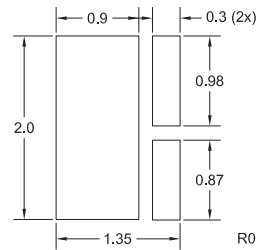


SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.062	0.064	1.57	1.63
B	0.062	0.064	1.57	1.63
C	0.014	0.017	0.36	0.43
D	0.002	0.004	0.04	0.10
E	0.004	0.006	0.10	0.16
F	0.011	0.013	0.27	0.33
G	0.019	0.021	0.47	0.53
H	0.009	0.011	0.22	0.28
J	0.023	0.026	0.59	0.65
K	0.028	0.030	0.71	0.77
L	0.048	0.050	1.22	1.28
M	0.024	0.027	0.62	0.68
N	0.009	0.011	0.22	0.28
P	0.043	0.045	1.09	1.16
R	0.024	0.027	0.62	0.68

TLM563 (REV:R1)

SUGGESTED MOUNTING PADS

(Dimensions in mm)



LEAD CODE:

- 1) Cathode
- 2) Cathode
- 3) Anode
- 4) Anode
- 5) Cathode
- 6) Cathode

MARKING CODE: CJB

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Mouser Electronics

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